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Tuna Newsletter

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- Southwest Region
- Southwest Fisheries Center

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Wes Parks, Editor

THE U.S. TUNA INDUSTRY IN FIRST QUARTER 1988

Wes Parks, SWFC
Pat Donley, SWR

Sixty-eight vessels of the U.S. tropical tuna purse seine fleet were at sea at least one day during the first quarter of 1988 up one vessel from the number active in the first quarter of 1987 (Table 1). Total capacity at sea was down marginally.

Table 1. Number of active U.S. purse seine vessels and capacity (st) in the first quarter of 1988 and 1987.

AREA	1988	1987
	No. of vessels	
W. ATL	0	0
E. PAC	40	34
W. PAC	28	33
TOTAL	68	67
	Capacity	
W. ATL	0	0
E. PAC	38,860	33,095
W. PAC	34,675	41,175
TOTAL	73,585	74,270

Receipts of all tuna species by U.S. canneries during the first quarter of 1988 totaled 118,271 short tons (st), very little different from both first-quarter 1987 receipts and recent long-term (1983-1987) average first-quarter receipts (Table 2). Deliveries in the first quarter from domestic sources, 48,263 st, were down 19% from first-quarter 1987 domestic deliveries while imports, 70,008 st, were up 21%.

Skipjack and yellowfin dominated deliveries of raw tuna to U.S. canneries in the first quarter of 1988, comprising 44% and 36% of total deliveries.

Deliveries of albacore to U.S. canneries in the first quarter of 1988 were 23,851 st, essentially the same as deliveries in the first quarter of 1987 and 10% greater than recent (1983-1987) average first-quarter deliveries. All but 17 st of the first-quarter 1988 domestic deliveries were made by vessels of the developing U.S. jig fishery in the southwest Pacific. The eastern Atlantic, western Pacific, and Indian Oceans were the major fishing areas for albacore delivered to U.S. canneries in first-quarter 1988 (Figure 1).

First-quarter deliveries of skipjack tuna to U.S. canneries were 52,139 st, up 19% from 1987 and about even with average first-quarter deliveries. The western Pacific and Indian Oceans were the major fishing areas for skipjack delivered to U.S. canneries in first-quarter 1988 (Figure 2).

U.S. cannery receipts of yellowfin tuna in the first quarter of 1988 were 42,281 st, down 15% from 1987 and about even with recent average first-

quarter deliveries. The major fishing areas contributing to deliveries were the eastern tropical Pacific and western Pacific Oceans (Figure 3).

Tuna fisheries of eight nations provided 92% of the raw, frozen tuna to U.S. canneries in the first quarter of 1988 (Table 3). Major suppliers were Taiwan, France and South Korea. Comparable statistics are not available for 1987 since data for 1987 and earlier do not differentiate between imports by flag of catcher vessel and imports by country of export.

Actual prices paid by canneries for raw, frozen tuna are a function of many variables and typically are different for each load received. However, an idea of typical price can be gotten from the contract price for U.S. vessels delivering to U.S. canneries. As noted in previous issues, U.S. contract prices (canneries in Puerto Rico) increased dramatically between first- and third-quarter 1987. Prices increased again between fourth-quarter 1987 and first-quarter 1988 when the price for 7.5 lb and above skipjack tuna in was $1,075 per st, up 54% from the price in first-quarter 1987 (Table4). The first-quarter price for 20 lb plus yellowfin was $1,200 per st, up 44% from the first-quarter 1987 price. Prices reported are prices paid to U.S. domestic contract vessels and do not apply to deliveries by non-contract domestic and foreign vessels in which case prices vary according to market conditions.

Wholesale list prices asked by canneries and brokers for canned product are also a function of many variables. Though actual wholesale price for any particular transaction is not known, an idea of typical price can be gotten from prices reported periodically by cannery representatives and brokers. As noted in previous issues, reported wholesale

Table 2. U.S. cannery receipts (st) of domestic and imported raw tuna (st) by species in the first quarter of 1988 and 1987.

		SPECIES			
YEAR	SOURCE	ALB	SJ	YF[1]	TOTAL
1988	Domestic	1,454	21,059	25,750	48,263
	Imported	22,397	31,080	16,531	70,008
	Total	23,851	52,139	42,281	118,271
1987	Domestic	70	21,546	37,605	59,221
	Imported	23,698	22,295	12,289	58,282
	Total	23,768	43,841	49,894	117,503
AVG 83-87	Domestic	38	25,578	28,986	54,602
	Imported	21,607	25,767	13,599	60,973
	Total	21,645	51,345	42,585	115,575

[1] Includes a small amount of bigeye, blackfin and bluefin tuna.

Table 3. U.S. cannery imports of raw tuna (st) by species and flag of catcher vessel in the first quarter of 1988.

	SPECIES			
COUNTRY	ALB	SJ	YF[1]	TOTAL
Taiwan	13,935	409	1,115	15,459
France	58	9,678	2,369	12,105
S. Korea	4,250	4,557	3,018	11,825
Spain	0	5,790	1,453	7,243
Ghana	0	4,484	1,455	5,939
Venezuela	13	1,287	2,852	4,152
Cayman Isl.	170	2,718	1,258	4,146
Japan	3,280	306	91	3,677
Other	691	1,851	2,920	5,462
Total	22,397	31,080	16,297	70,008

[1] Includes a small amount of bigeye, blackfin and bluefin tuna.

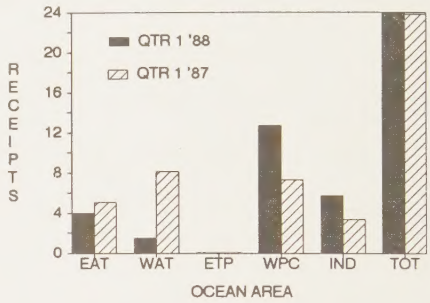

Fig. 1. Receipts (1000 st) of albacore to U.S. canneries by ocean area of capture in the first quarter of 1988.

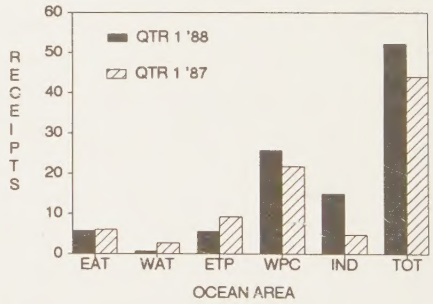

Fig. 2. Receipts (1000 st) of skipjack tuna to U.S. canneries by ocean area of capture in the first quarter of 1988.

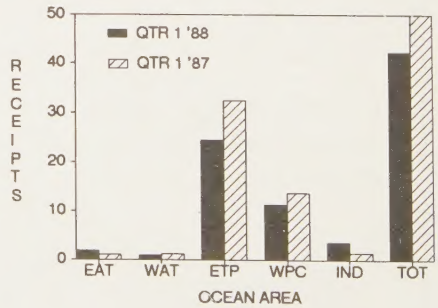

Fig. 3. Receipts (1000 st) of yellowfin tuna to U.S. canneries by ocean area of capture in the first quarter of 1988.

list prices in California for tuna packed in water changed from first quarter to third quarter 1987. First-quarter 1988 wholesale prices remained essentially at fourth-quarter 1987 levels (Table 5). First-quarter 1988 price for advertised-label, white meat tuna canned in water ranged between $59.50 and $63.75 per case of 24, 12.5 oz cans, up 6% to 15% from the first-quarter 1987 price. The price range for private-label, white meat tuna was $51.00 to $52.00 per case, up 12% to 20%.

Reported wholesale list prices in the first quarter of 1988 for advertised-label, light meat tuna canned in water were $42.45 to $45.00 per case of 48, 6.5 oz cans, up as much as 32% from first-quarter 1987 prices. Prices for private-label, light meat tuna were $29.00 to $32.50 per case, up 9% to 41%.

Imports of canned tuna to the U.S. in 1988 are running ahead of both 1987 imports and recent long-term (1983-1987) average imports (Figure 4). First-quarter 1988 imports of canned tuna not in oil, 109.5 million pounds, exceeded first-quarter 1987 imports by 22%. First-quarter imports exceeded average (1983-1987) imports by 76%. Imports of canned tuna to the U.S. in excess of an annual quota are subject to increased duty. By the end of the first quarter of 1988, imports of canned tuna, not in oil, exceeded the 1988 quota of 85.2 million pounds by 29 percent.

Diane Pickelsimer, SWFC, contributed to this article.

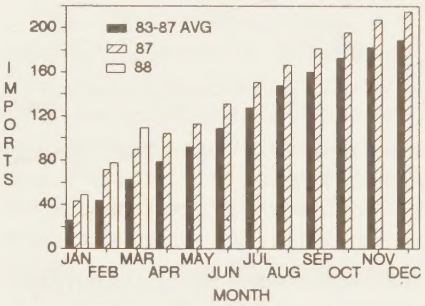

Figure 4. Cumulative imports (millions of lbs) of canned tuna not in oil to the U.S. in the first quarter of 1988 and 1987 and average (1983-1987) first-quarter cumulative imports.

Table 4. Contract prices (U.S.$ per st) for raw, frozen skipjack and yellowfin tuna delivered by U.S. vessels to U.S. canneries in Puerto Rico in the first quarter of 1988 and 1987.

	SKIPJACK		YELLOWFIN	
SIZE CLASS (lbs)	1988	1987	1988	1987
20 +	-	-	1,200	765-780
7.5 to 20	1,075	685-700	1,075	685-700
4 to 7.5	1,010	615-630	1,010	615-630
3 to 4	800	485-500	800	485-500
under 3	525	285-300	525	285-300

Table 5. Wholesale list price (U.S. $ per short ton) in California for tuna canned in water for representative case packs in the first quarter of 1988 and 1987.

CASE PACK	YEAR	ADVERTISED LABEL	PRIVATE LABEL
White meat[1]	1988	59.50 - 63.75	51.00 - 52.00
	1987	55.40 - 55.95	43.50 - 45.50
Light meat[2]	1988	42.45 - 45.00	29.00 - 32.50
	1987	34.20 - 43.45	23.00 - 26.50

[1]White meat: solid, 12.5 oz (24)
[2]Light meat: chunk, 6.5 oz (48)

THE SOUTH PACIFIC TUNA ACT OF 1988

E. Charles Fullerton, SWR

On April 2, 1987, in Port Moresby, Papua New Guinea, representatives of the United States and 16 member states of the South Pacific Forum signed a treaty authorizing U.S. tuna vessels to fish within fishing zones of a large region of the South Pacific (Fig 1). The signing of this treaty was the culmination of over three years of access negotiations. On June 7, 1988, President Reagan signed the South Pacific Tuna Act of 1988 (PL. 100-330), implementing provisions of the treaty.

The 16 island nations party to the treaty are Australia, Cook Islands, Federated States of Micronesia, Fiji, Republic of Kiribati, Republic of the Marshall Islands, Republic of Nauru, New Zealand, Niue, Republic of Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

The treaty will be in effect for five years. Under the terms of the treaty, the United States will pay the Pacific Island States $50 million in economic assistance over the five years of the treaty. In return for fishing rights, the U.S. tuna fishing industry will contribute $2 million in license fees and technical assistance during the first year of the Treaty. During the remaining four years, license fees will be indexed to the price of tuna, subject to a minimum annual fee of $50,000. The tuna industry will also provide technical assistance, valued at $250,000 annually, to the island states.

The United States has a long history of contact with the island nations of the South Pacific, dating back to the l9th century, when U.S. whaling vessels and missionaries paid frequent visits to the islands. During World War II, the U.S. military operated extensively in the South Pacific suffering nearly 300,000 casualties (killed or wounded).

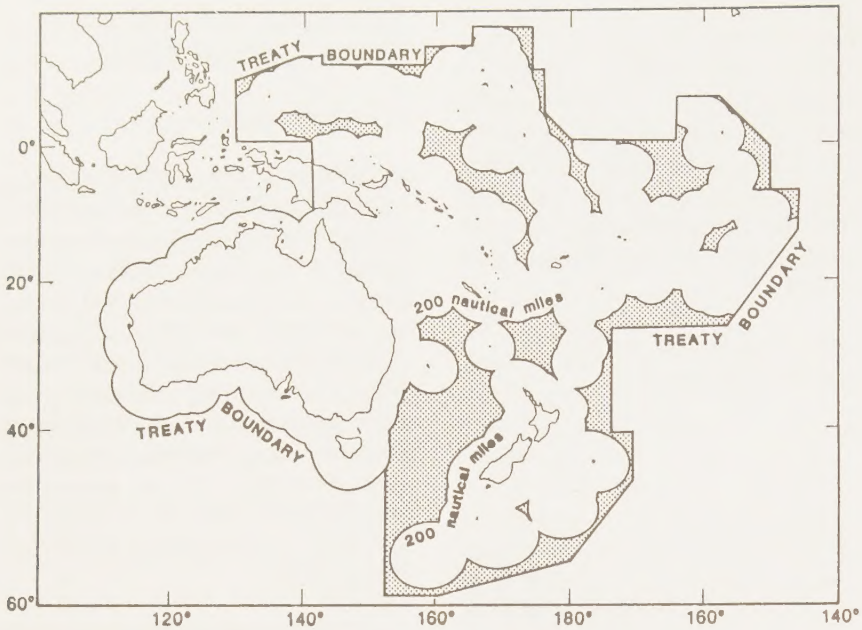

Fig. 1 Approximate boundaries of the South Pacific-U.S. Tuna treaty. Source: U.S. Department of State (7195 7-87 State (INR/GE)).

In the post-war years, the rich fishery resources of the South Pacific attracted U.S. tuna fishermen. As the tuna fishery developed in the South Pacific, U.S. processors and vessel owners reached independent agreements authorizing fishing activities in the territories of some island nations.

The Treaty has implications for U.S. policy regarding management of tuna fisheries. The Magnuson Fishery Conservation and Management Act of 1976 established U.S. sovereignty over fisheries in its exclusive economic zone (EEZ) from 3 to 200 miles offshore. The Magnuson Act specifically excluded tuna from its jurisdiction, defining it as a "highly migratory species." The U.S. position is that highly migratory species should not be managed on a unilateral basis, but rather should be managed by international cooperation by coastal states and distant water fishing nations.

While the United States neither recognizes nor claims jurisdiction over tuna beyond 12 nautical miles, the Pacific island nations claim jurisdiction over all living marine resources within their 200 nautical mile EEZ, including tuna resources. As a result of these conflicting laws regarding jurisdiction over highly migratory species, the United States in recent years has been involved in fishery disputes with several Pacific Island States. These disputes have resulted in a cycle of seizures of U.S.-flag tuna seiners and subsequent retaliatory U.S. embargoes mandated by the Magnuson Act, and payment for losses suffered by U.S. fishermen under the Fishermen's Protective Act.

The Treaty, with the South Pacific Tuna Act, should end these disputes in the treaty area. They constitute a significant step toward international management of tuna stocks, furthering U.S. fishery policy goals. By eliminating the primary source of bilateral friction between the United States and the Pacific Island States, the treaty and act also benefit U.S. foreign policy.

The South Pacific Tuna Act provides the framework for implementing Treaty agreements. The act outlines U.S. obligations with respect to licenses, inspection and enforcement, reporting, carrying observers and penalties.

U.S. purse seine vessels are required to obtain a license to fish in the Treaty area. Licenses are issued by the South Pacific Forum's regional fisheries organization, the Forum Fisheries Agency (FFA). License application forms are available through NMFS, under requirements and procedures established by the Regional Director, Southwest Region. Each applicant is required to designate an agent for the service of legal process to be located at Port Moresby. In the initial year under the treaty, 40 vessel licenses will be available at a minimum of $50,000 each with an additional ten licenses available for $60,000 each. A similar number of licenses will be available in subsequent years -- license fees in future years will be indexed to the price of landed fish.

Licenses are issued for one year. The licensing period begins June 15 and is the same for all vessels -- there are no provisions for staggered times or for prorated fees for vessels that begin fishing later than June 15. NMFS is responsible to ensure that each applicant meets the criteria as set forth in the Treaty with special emphasis placed on the financial solvency of the vessel owner. FFA will review each license application and notify the applicant of license approval. The same licensing procedure will be followed in future years.

A U.S. purse seine vessel holding an FFA license must be available for inspection of gear, equipment, records, and fish by an authorized officer of a Pacific island party to the Treaty. The inspection process is designed to not hinder the lawful operation of the vessel. To facilitate communication with enforcement authorities, vessel operators are required to monitor information distress radio frequencies. To facilitate identification by enforcement authorities, vessel radio call

signs are required to be clearly visible at specific locations on the vessel and on equipment normally separated from the vessel during fishing operations. Each vessel is required to carry a copy of its issued FFA license or be able to cite the license number if the document is not received aboard the vessel. Vessels transiting a closed area are required to stow fishing gear in a manner so that it is not readily available for fishing.

Licensed vessels are required to report their activities within the license area to FFA. They are to report, by either telex or facsimile, (1) before departing from port to begin a fishing trip in the license area; (2) each Wednesday while in the license area or in a closed area; and (3) within 48 hours of entering port to unload fish from any trip involving fishing within the licensing area. Additional reporting requirements may be set by each Pacific Island Party having jurisdiction along the route of travel. The vessel master is responsible to comply with the reporting requirements.

NMFS has opened an office in American Samoa to collect reports and assure their timely submission to FFA. There are two required reports. The first, the "Purse seine vessel catch report," contains information on operations during each day of operations inside the treaty area, entered daily by the vessel's master. The second report, the "Purse seine unloading log sheet," is completed when the vessel unloads and is signed by the vessel's master and the receiving agent. Completed reports are collected by NMFS representatives who submit the records to the FFA. The treaty requires that the unloading log sheet must be posted by registered mail to FFA within 14 days following the unloading. NMFS port samplers also collect biological information (length frequencies and species compositions and other biological data) at the time of unloading.

A U.S. vessel may be required to carry an observer assigned by FFA. The treaty and the act include specific instructions on standards of courtesy, food, accommodation, and medical facilities to be extended to FFA fishery observers whose duties will be much the same as those of U.S. observers aboard foreign vessels in the U.S. EEZ. Observers are not enforcement agents; they monitor fishing operations for compliance with treaty requirements. In addition, they may collect samples and other fishery data and may observe the vessel unloading its catch.

The Act provides civil and criminal penalties for violations of conditions of the Act such as using a dangerous weapon or threatening an FFA representative with bodily injury. The amount of civil penalty will not exceed $250,000 for each violation and violators will be allowed to obtain a review of the case from a U.S. District Court.

Thirty U.S. purse seine vessels presently are operating under FFA license. The initial licensing program was carried out with a minimum of difficulty, and vessels began fishing in treaty waters on June 15. Observer and reporting programs are in the early stages of implementation and going well considering the novelty of the programs in this area.

The Treaty provides a unique opportunity to assist both the U.S. tuna industry and the Pacific Island States. The spirit of cooperation between the United States and Pacific Island States through the Forum Fisheries Agency has been gratifying. There is every reason to believe this spirit of cooperation will carry through the remainder of time the Treaty is in effect.

Jim Herkelrath, SWR, contributed to this article.

A REVIEW OF THE FISHERY FOR TROPICAL TUNAS IN THE EASTERN PACIFIC OCEAN

James Joseph, Inter-American Tropical Tuna Commission

The tuna fishery of the eastern Pacific Ocean had its beginning off Southern California shortly after the turn of the century, when albacore were first canned in San Pedro, California. The fishery grew rapidly, spreading southward to tropical waters, where yellowfin and skipjack were caught, and by 1940 vessels based in Southern California operated as far afield as the equator and several hundred miles offshore. After a lull during World War II the industry continued to grow, and in the years immediately after the war the annual catch of yellowfin and skipjack averaged over 110,000 short tons.

At about that time the nations of the region began to express concern over the effect that this fishery might be having on the stocks of tuna and of the baitfish used to catch them. This eventually led to Costa Rica and the U.S. entering into the agreement which established the Inter-American Tropical Tuna Commission (IATTC), whose purpose was to study the fishes caught by the tuna fishery, including the baitfishes and, if necessary, to recommend measures designed to maintain the stocks at levels which could support the maximum yields. After several years of study, the Commission staff concluded that the stocks of yellowfin and skipjack were not being adversely affected by the fishery, but that the stock of yellowfin was being fished near its optimum level.

In the mid-1950s, economic forces in the U.S. industry were causing the bankruptcy of more and more vessel owners. The development of the now almost universal purse-seine fishing technique,

which more than doubled the efficiency of the boats, was partially a response to this situation. The conversion from bait-fishing to purse-seining was widespread and rapid, and the catch of yellowfin immediately began to increase. However, after peaking in 1960 and 1961, it began to decline as a result of heavy exploitation. The Commission staff accordingly recommended management measures, in the form of an overall quota on the catch of yellowfin. This quota system first came into effect in 1966, and was implemented each year until 1979. Under this system, boats were free to fish for yellowfin until the quota was reached; after that they could either fish for other species in the eastern Pacific, or operate in other areas.

When the conservation program began, the fleet consisted predominantly of U.S.-flag vessels, and the jurisdiction of coastal states was generally accepted as extending to between 3 and 12 miles from shore. Most tunas are caught more than 12 miles from shore, and so the vessels were free to pursue their prey almost anywhere they occurred.

These two situations began to change. Other countries, particularly the Latin American coastal states, increased their fleets, and the coastal nations began to extend their jurisdictions seaward. The coastal states with small developing fleets maintained that under the existing system they could not compete effectively with the large U.S. fleet. They held that, because a large portion of the catch was taken from waters off their coasts, they should be allocated special shares of the permissible total catch. Such shares were allocated, but ostensibly on the basis of economic hardship rather than of jurisdiction over the resource. Each year it became increasingly difficult for the countries involved to reach agreement on the size of these shares and the implementation of the quota.

As more nations extended their jurisdictions to 200 miles, and as the fleets of Latin American nations continued to expand, dissatisfaction with the conservation program increased. In 1977 Mexico and Costa Rica convened a plenipotentiary meeting to draft a new treaty for tuna management in the eastern Pacific Ocean, under which the present IATTC would be expanded and become responsible for economic and political studies and duties, in addition to its scientific role. The idea was to establish a system of national quotas based on the amounts of tunas within the individual 200- mile limits, and to set up an international licensing scheme to be administered by the IATTC. However, after two more plenipotentiary meetings and about 20 informal meetings, no agreement was reached, and the scheme was abandoned in 1979.

In almost direct response to the failure of these negotiations, many of the Latin American coastal states, particularly Mexico, restricted access of U.S. vessels to their 200-mile zones. They also continued to expand their fleets. Ten years ago the U.S. fleet took about 75% of the catch; it is presently taking about 33%. The Latin American states now account for more than 63% of the catch, and indications are that their share will continue to grow.

For the last 10 years there has been no conservation program in the eastern Pacific. Fortunately, the stock of yellowfin is in good condition. After declining during 1979-1981, it grew rapidly until 1985, due to low fishing effort, exceptionally high recruitment, and unusually low fishing mortality on small fish. The low fishing effort was due principally to the low availability of fish resulting from the strong El Niño of 1982-1983, and the consequent transfer of the fleet to the western Pacific. During 1986 and 1987 the production of yellowfin--some 300 thousand tons each year--was the highest ever recorded for the fishery, and the outlook for 1988 and 1989 is good, assuming conditions remain normal, although the catches will probably not be as high as in 1986 and 1987.

During the last few years there has been no need for conservation measures to protect the stocks of tuna, which is fortunate, as there is currently no mechanism for implementing any such program, nor agreement on how to administer it. However, conservation may well prove necessary in the not-too-distant future, as the fishing fleets in the eastern Pacific are still expanding, albeit slowly, and the surpluses of fish from the excellent recruitment of recent years are dwindling. Unfortunately, the chances of putting a conservation program into effect, if and when needed, are not good.

There have been several attempts at formulating a new framework for tuna management since the failure of the 1977- 1979 Mexico-Costa Rica initiative. Two of these, the San Josi Agreement and the OLDEPESCA Treaty, are particularly worthy of mention.

The San Josi Agreement, or Eastern Pacific Ocean Tuna Fishing Agreement (EPOTFA), was drafted by Costa Rica, Panama, and the United States. It establishes an international organization responsible for issuing licenses that permit the bearers to fish in the waters of the member states. The proceeds from the sales of these licenses would be distributed to the member states in proportion to the amounts of tuna harvested in their 200-mile zones. The treaty, which is open to all states whose vessels participate in the fishery, must be ratified by five coastal states before entering into force. At present five states--Costa Rica, Guatemala, Honduras, Panama, and the United States--have signed, but only three have completed the ratification process. This treaty is an attempt to resolve the important issue of access to the resource, which must be settled

before there can be agreement among nations on conservation measures. The treaty also calls upon the nations to resolve the difficult problem of distribution of the catch among users. It is possible that some of the coastal states may affiliate themselves to this treaty, but others--Mexico and Ecuador, for example--may find it unacceptable, and it may require substantial alterations before all the Latin American coastal nations subscribe to it.

The other initiative to resolve this problem was taken through OLDEPESCA, the fisheries arm of the Sistema Econsmico de Amirica Latina (SELA). For the last four years the members of OLDEPESCA, led by Mexico, have attempted to draft a treaty which would establish a new organization for the management of tunas in the eastern Pacific. That organization would be open to any state of the region which recognized the jurisdiction of the coastal states over tunas in their waters. Since the United States does not recognize such jurisdiction, it is effectively excluded, unless, of course, it changes its policy on tuna. The treaty calls for the coastal states to declare how much tuna is available in their 200-mile zones, how much their fleets will harvest, and whether they will declare any surpluses, which other nations could then take after purchasing licenses from the nations concerned. The organization itself would sell licenses to fish on the high seas beyond the 200- mile limits. If vessels of a non-member state fished on the high seas without licenses, the member states would be required by the treaty to invoke economic and political sanctions against the offender.

Despite numerous meetings, the most recent held in Mexico City in January, the members of OLDEPESCA have so far been unable to reach agreement on a draft treaty which would be acceptable to all.

It is difficult to say where we go from here, but go somewhere we must. The present situation is detrimental to international goodwill and harmony, to the tuna industry, and to the stocks of tunas and the dolphins taken in association with them. The nations of the region must be willing to compromise and get on with the task of formulating a framework with which they can all live, and within which the tunas can be exploited rationally and the dolphins protected. Whatever the form of the agreement, certain fundamental issues need to be dealt with: the migratory nature of the tunas and of the fleets which pursue them mean that any management program must cover the entire range of the fishery to be effective; there must be some formula for distributing the catches which recognizes the claims of coastal states as well as the historical involvement in the fishery of other, non-coastal states; and problems of access to the resource must be resolved.

These are all difficult problems, and solutions will not be easy to find. However, none of the obstacles is insuperable, and with dedication and diplomacy they can be overcome.

THE DEVELOPING U.S. YELLOWFIN TUNA FISHERY IN THE GULF OF MEXICO AND U.S. SOUTH ATLANTIC REGION

Chuck Adams, Florida Sea Grant, University of Florida

Catches in the U.S. longline fishery for yellowfin tuna based in the southeastern U.S. have increased dramatically in the 1980's. Catches of yellowfin in the fishery, which operates in the Gulf of Mexico and in the Atlantic off the southeastern U.S., have increased partly due to a switch in target-species to yellowfin from swordfish, the traditional target of the fishery. Increased yellowfin catches have also been in response to demand for sashimi (raw fish) tuna in the export market and to the growing popularity of fresh and frozen tuna in U.S. markets.

Total tuna landings have increased seven-fold since 1980, primarily since 1982 (Fig. 1). During the period 1983 - 87, a total of 24.9 million pounds of tuna were landed (Table 1) in the Gulf and U.S. south Atlantic fishery. The predominant species were yellowfin (81%) and bluefin (5%), with lesser quantities of little tunny, bigeye and blackfin tuna. The major tuna producing states in the region have been Florida, Louisiana, and North Carolina. Florida was the leader in terms of volume landed, producing the majority of the total landings of yellowfin (45% of the total), bluefin (52%), and bigeye (79%) (Table 2).

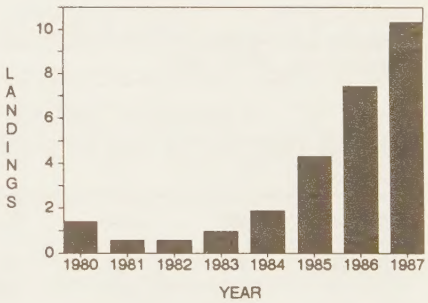

Fig. 1. Total landings (million lbs) of all tuna species by the U.S. longline fishery in the Gulf of Mexico and U.S. south Atlantic region, 1980-1987.

Yellowfin tuna landings increased from 119,000 pounds in 1980 to 8.8 million pounds in 1987 in the Gulf and south Atlantic fishery (Fig. 2). During the same period dockside value increased from $164,000 to $16.6 million. Production exceeded 1 million pounds in 1984 and has increased by an average annual rate of 114 % since.

Table 1. Tuna landings (1000 lbs) by the U.S. longline fishery in the Gulf of Mexico and U.S. south Atlantic region by species, 1980-87.

Year	Yellowfin	Bluefin	Bigeye	Blackfin	Little	Other	Total
1980	119	20	1	1,036	117	97	1,389
1981	79	34	---	213	93	120	540
1982	131	89	16	11	145	186	577
1983	321	137	31	166	109	176	940
1984	1,091	231	67	15	101	384	1,889
1985	3,451	224	107	27	88	379	4,285
1986	6,419	255	155	26	170	429	7,451
1987	8,839	425	306	89	252	424	10,335
Total 83-87	20,121	1,272	687	355	720	1,792	24,947
Percent 83-87 (%)	81	5	3	1	3	7	

Data Source: NMFS

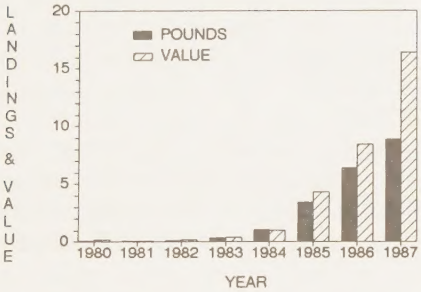

Fig. 2. Landings (million lbs) of yellowfin tuna, 1980-1987.

Table 2. Cumulative 1983-1987 landings (1000 lbs) of tuna by major species.

Species	State	Lbs	%
Yellowfin	FL	9,136	45
	LA	8,287	41
	TX	1,553	8
	NC	1,045	5
	Other	106	1
Bluefin	FL	672	52
	LA	494	39
	TX	99	8
	Other	6	1
Blackfin	NC	175	49
	FL	66	19
	LA	63	18
	AL	47	13
	Other	41	1
Bigeye	FL	525	79
	NC	133	20
	Other	7	1
Little	NC	429	60
	MS	290	40

Data Source: NMFS

The majority of the yellowfin production (93% for 1987) comes from the Gulf of Mexico (Table 3). Florida has been the leader in yellowfin production, with landings increasing from 76,000 pounds in 1980 to 3.6 million pounds in 1986 (Fig. 3). Florida reported a decline to 1.3 million pounds in 1987. Louisiana has experienced a rapid and continuous increase in yellowfin landings, from 227,000 lbs in 1985 to 5.6 million pounds in 1987, surpassing Florida for the first time. Production in Texas also exceeded that of Florida in 1987, as tuna longlining effort moved toward the western Gulf of Mexico. Landings in North Carolina, the major non-Gulf of Mexico participant in the fishery, increased from an estimated 4,000 pounds in 1980 to 463,000 pounds

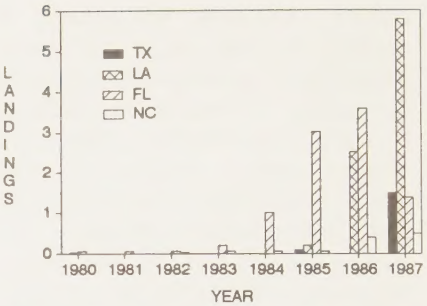

Fig. 3. Landings (million lbs) of yellowfin tuna by state, 1980-1987.

in 1987 (a sizable portion of these landings were reportedly from charter boats).

The decreased landings of yellowfin reported by Florida for 1987 may reflect a more accurate accounting of the state in which the tuna were initially off-loaded, as well as a general westward movement of tuna longlining effort. Prior to 1987, a portion of Gulf of Mexico yellowfin "landed" in Florida was actually landed in Louisiana then trucked to a Florida west coast port for further processing before being initially reported. Florida continues to play a major role in processing yellowfin caught in the Gulf of Mexico.

Production of yellowfin tuna in the Gulf and South Atlantic fishery appears to be seasonal. Available data suggest that landings in the Gulf are characterized by peaks in the summer and early fall months. Average

Table 3. Yellowfin landings (1000 lbs) and dockside value (U.S. $ 1000) by subregion, 1980-1987.

	Gulf[1]		South Atlantic[2]	
Year	Pounds	Value[3]	Pounds	Value
1980	52	$ 86	67	$ 78
1981	27	28	52	75
1982	50	85	81	84
1983	148	236	173	186
1984	775	681	316	377
1985	3,257	4,063	194	227
1986	5,893	7,879	526	523
1987	8,230	15,681	609	695

[1]Texas, Louisiana, Mississippi, Alabama, and Florida West Coast
[2]Florida East Coast, Georgia, South Carolina and North Carolina
[3]Value at dockside
Data Source: NMFS

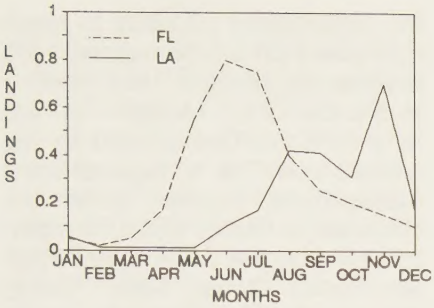

Fig. 4. Landings (1000 lbs) of yellowfin in Louisiana and of the Florida west coast in 1986.

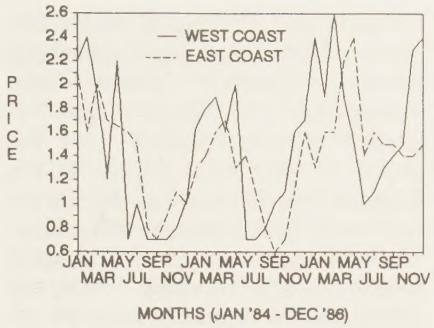

Fig. 5. Dockside prices (U.S. $ per lb) for yellowfin tuna on the east and west coasts of Florida by month, 1984-1986.

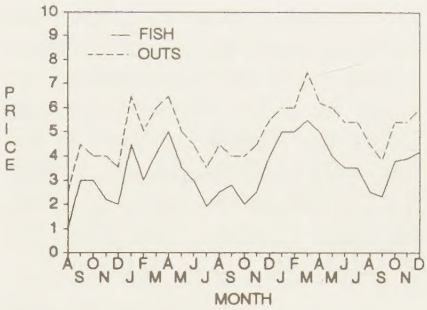

Fig. 6. Wholesale prices (U.S. $ per lb) for two forms of Florida yellowfin tuna at New York's Fulton Fish Market by month, August 1985-December 1987.

monthly landings for the 1980-85 period show peaks in the late summer and again in the early fall. Production is at its lowest in the winter and spring months. This pattern is corroborated by the 1986 monthly landings data for Louisiana and the Florida west coast (Fig. 4).

Monthly dockside and wholesale prices for fresh yellowfin tuna also fluctuate considerably in the Gulf and U.S. south Atlantic fishery. This variability is likely related to a number of factors, such as those associated with supply (i.e. biology, environment, imports, and effort) and demand (i.e. consumer incomes, availability of substitute species, and prices). Landed yellowfin are categorized by grade: grade 1, grade 2, and grade 3, and "boat-run" (e.g. ungraded). This grading scheme, which rewards the producer with a higher per-pound price for a higher quality product (i.e. grade 1), may vary across local markets in the region and may change with market conditions. In addition, the rather subjective methods used for identifying a specific grade may lead to similar fish being graded differently by different dockside and/or wholesale buyers.

Dockside prices for yellowfin tuna in the Gulf and south U.S. Atlantic fishery appear to be indirectly related to seasonal abundance. Three years of monthly dockside prices for the Florida east and west coasts suggest that prices tend to be higher from November to March, when production is lowest, and lower in June to October when production is highest (Fig. 5).

There have been reports of dockside prices of up to $3.75 and $5.00 per pound for boat-run (i.e. ungraded) and grade 1 fresh yellowfin tuna. While the available data do not show these prices, they do suggest that prices are generally stable or increasing on a yearly basis, even as production continues to increase.

Upward trending dockside price from year to year implies a strong demand and a relatively stable market for fresh yellowfin tuna even though an indirect relationship may exist between prices and landings on a month to month basis. This is also supported by the available wholesale price data for Florida yellowfin tuna at the New York's Fulton Fish Market. Per pound prices for Florida yellowfin tuna "by the fish" (i.e. heads off/ eviscerated) and "cuts" (i.e. loins) have, in general, trended upward during the period from August 1985 - December 1987 (Fig. 6). The margin between whole fish and cuts has been approximately $1.50 for whole fish and cuts, respectively.

Wholesale dockside price for fresh Gulf and south Atlantic yellowfin appears to be indirectly related to production. For the period August 1985 - December 1987, as production increased in the summer, wholesale prices tended downward. Then as production decreased in the fall, prices trended upward.

The yellowfin tuna fishery in the Gulf of Mexico and U.S. South Atlantic is evolving. Fishing effort in the Gulf in 1988 continues to move further west. Although the center of production is still off the mouth of the Mississippi River, some boats are now concentrating effort off Texas. In addition, most fishing activity is moving to more shallow water. Many boats are now moving into waters 500 fathoms and less. Early reports indicate that the average size fish in the catch is increasing, with production in early 1988 being characterized by 100 pound fish.

Operational changes for 1988 include the widespread use of live bait. In previous years, dead bait was preferred. Also, the typical trip has been reduced from 7 days to 5 days, with some vessels using shorter longlines. The typical longline has been 30 - 40 miles. However, a number of Vietnamese-owned vessels have begun using gear of 15 - 20 miles. Other vessels have apparently begun to adopt this strategy. Shorter trips with shorter gear has resulted in fewer fish per trip, but quality (i.e. number of grade 1 fish) has reportedly increased. Estimates of the number of vessels targeting yellowfin in the Gulf of Mexico range between 200 to 300.

Prices have continued to increase in a market that continues to stabi-

lize. Dockside prices for grade 1 fish currently are in excess of $3.00 per pound, with an approximate $1 break for each grade. Wholesale prices for Florida yellowfin in the New York Fulton Market are currently $3.50 (whole fish) and $5.50 (loins) for grade 1, while grade 2 fish are $2.50 (whole) and $4.50 (loins).

MEETINGS

- November 2-10, 1988. Annual meeting of the Standing Committee on Research and Statistics. International Commission for the Conservation of Atlantic Tunas (ICCAT).Madrid, Spain. O. Rodriquez-Martin, ICCAT, Principe de Vergara, 17, 28001 Madrid, Spain.

- November 14-16, 1988. Special meeting of the Commission. ICCAT. Madrid, Spain. O. Rodriquez-Martin, ICCAT.

RECENT DEVELOPMENTS IN TUNA FISHERIES

Editor's note: The following news articles were compiled from reports of the NMFS Branch of Foreign Fisheries Analysis, Office of International Fisheries, Washington, D.C. Dennis Weidner, Don Jacobson, P. Niemeier and Francisco Quintanilla contributed to these reports with the assistance of other NMFS officials and U. S. Foreign Service officers.

EASTERN PACIFIC

INTER-AMERICAN TROPICAL TUNA COMMISSION HOLDS ANNUAL MEETING--The Annual Meeting of the Inter-American Tropical Tuna Commission was held in La Jolla, California, March 8-10, 1988. The meeting was attended by representatives from the five member countries (U.S., Japan, France, Panama, and Nicaragua), and by observers from Colombia, Guatemala, Mexico, Spain, Taiwan, and Venezuela. The Commission reviewed current research and the status of tuna and dolphin in the Eastern Tropical Pacific. At current high levels of abundance, the yellowfin tuna resource should support above average harvests. Thus, the Commission recommended an initial catch quota for yellowfin tuna in the Commission yellowfin Regulatory Area of 190,000 short tons, with provision for the Commission's Director of Investigations to increase this limit up to 250,000 tons if warranted by resource conditions.

LATIN AMERICA

CHILE CANCELS PLANNED TUNA FISHERY -- An unknown Chilean company has apparently reconsidered its decision to launch a tuna fishery in the eastern Pacific. The Chileans reportedly ordered four 69-m seiners with carrying capacities of 1,863 m^3 from an italian shipyard. The vessels are almost finished, but the Chilean company cannot complete the financing. A British agent, EUROSHIP, is currently seeking buyers.

CHANGES TO COSTA RICAN TARIFFS WORRIES TUNA CANNERS -- Revisions of tariff agreements in Costa Rica are increasing duties on raw material and reducing duties on finished products. Canners in Costa Rica are worried, as a consequence, that they will not be able to compete with tuna and sardine canners from other Central American countries and from Mexico. Costa Rican canners would like the government to require foreign fishermen operating off Costa Rica to land part of the catch in the country. Currently, only two small Costa Rican seiners are landing tuna in Cost Rica for processing by the country's two canneries.

OLDPESCA MEETS TO DISCUSS LATIN AMERICAN REGIONAL TUNA AGREEMENT-- Latinoamericana de Desarrollo Pesquero (OLDEPESCA) officials were reportedly disappointed by the failure of the participating countries to reach agreement on a new regional tuna body at the January, 1988 meeting in Mexico City. Mexican officials have for some time lobbied for the establishment of a regional tuna management regime under the auspices of OLDEPESCA, in competition with the U.S.-backed Eastern Pacific Ocean Tuna Fishing Agreement (EPOTFA). Press reports stressed that the delegations exchanged views and were in agreement on the basic issues. Some observers at the OLDEPESCA meeting, however, report privately that several important tuna fishing countries differ sharply on key issues. The next OLDEPESCA session will be a working group meeting in Lima, but its date has not yet been set.

ENVIRONMENTALISTS CALL ATTENTION TO INCIDENTAL LATIN AMERICAN DOLPHIN KILL -- Environmental groups are paying increased attention to the incidental dolphin kill of Latin American tuna fishermen. Environmentalists provided major U.S. television networks with videos of dolphin mortalities aboard a Panamanian seiner. One network failed to explain that the video depicted foreign fishermen and also did not mention efforts by U.S. fishermen to avoid dolphin mortalities. Greenpeace International has also launched a campaign in the European Community (EC) to ban importation of yellowfin tuna caught in the eastern Pacific because of the dolphin mortality issue. Greenpeace, on March 22, presented EC officials with the same video shown on U.S. television. Several Latin American countries would be affected by any EC ban, but Mexico is the only country which is currently heavily dependent on the EC market. Most of Mexico's tuna catch, which is almost entirely yellowfin, is marketed in EC-member Italy. Mexican Secretaria de Pesca (SEPESCA) officials maintain that the Greenpeace allegations are without foundation. Environmental groups in Mexico, however, have expressed some concern over the dolphin issue.

MEXICAN TUNA PROCESSING CAPACITY INCREASES -- Secretaria de Pesca (SEPESCA) official Jose Luis Cubria Palma claims that Mexico can now process 170,000 t of tuna annually. He stated that 9 new tuna seiners were added to the tuna fleet in 1987, bringing the fleet size to 95 vessels. Mexico is also adding 7 new tuna canneries in 1987 and 1988, bringing the installed processing capacity to 850 mt per 8 hour shift.

MEXICO PROMOTES TUNA SALES IN EUROPE -- A group of Mexican tuna exporters visited canneries in France, Italy and Spain during 1987 to promote sales. In France, they met with the Sociedad para la Venta de Atun Congelado (SOVETCO), and the Sindicato National de Armadores de Atuneros Congeladores (SNAGG) to discuss tuna fishing and processing methods. In Italy they met with representatives of Trinity Alimentari Italia S.p.A., and the processing plants De Langrade & Grancelli, Iginio Mazzola, Ceno, Bertoli and De Rica to discuss tuna sales. Italy is Mexico's primary tuna export market. In Spain, they met with members of the Associacion Nacional de Armadores de Buques Atuneros Congeladores (ANABAC), and the Associacion de Grandes Atuneros Congeladores. They also spoke with representatives of two canneries (Casa Calvo and Conservas Garavilla) to discuss tuna processing and sales.

NEW MEXICAN TUNA EXPORTING COMPANY FORMED- Mexican investors have established a new tuna company, Exportadores Atuneros Unidos. The company was established by leading vessel owners to facilitate tuna exports. Victor Abraham, a leading figure in two tuna fishing companies (Atunera Mayo and Atunera del Carmen), was appointed president.

MEXICAN TUNA CANNERS EXPERIENCE SHORTAGE OF RAW PRODUCT -- There is a tuna shortage on the Mexican market, in sharp contrast to the situation a few years ago when warehouses had large inventories of unsold tuna. Paradoxically, Mexican tuna fishermen reported near record catches in 1987. The fishermen have been transshipping most of their catch in foreign ports, however, resulting in a shortage of raw material for Mexican tuna canneries. The current situation is also a result of rising demand for tuna in Europe, the lifting of the US tuna embargo, high international prices, labor problems, and low fixed domestic prices. Pleas to fishermen to land their catch in Mexican ports out of patriotic duty seem to have had little effect. The Government, in response to industry demands, raised the domestic prices of tuna products in October 1987, but these prices are still well below international levels.

THREE VESSELS ADDED TO MEXICAN TUNA FLEET -- Three new vessels have been added to the Mexican tuna fleet. The Tunamar company has added the purse seiner *Cancun* to its fleet. The 1,200 mt vessel was built by Astilleros de Salina Cruz and was financed by the Fondo Nacional para el Desarrollo Pesquero (FONDEPESCA). The Mexatun company has also purchased a new tuna purse seiner, *Convemar*. This 1,090 mt vessel, also financed by FONDEPESCA, was built by Astilleros de Marina (Tampico) with designs and technical assistance from the Rados Western Corporation. The Comextun company has acquired Mexico's first refrigerated cargo vessel, the 2,400 mt *Karen*.

MEXICO TO RESEARCH ALTERNATIVE TUNA PACKAGING -- The Secretariats of Fisheries and Planning and the National Science Council (CONACYT) signed contracts with four national research institutes to develop alternatives to metal cans for the packaging of tuna and sardines. According to the terms of the billion-peso research project, the Instituto Mexicano del Petroleo will try to develop plastic packaging which could be used interchangeably for different fishery products, such as tuna and fishmeal. Plastic packaging would be advantageous for Mexico, as it would replace imported metal plate with plastic produced domestically by Mexico's burgeoning petroleum industry. Also included in the agreement is a fishmeal project by the Centro de Investigacion en Alimentos y Desarrollo to experiment with poultry feed formulas, and to develop more efficient uses for the liquid by-products of fishmeal production.

MEXICO DEVELOPS TUNA EXPORT PLAN -- Mexico plans to export 100,000 mt of tuna in 1988, a 33 percent increase from the 75,000 mt shipped in 1987, according to Pedro Ojeda Paullada, Mexican Secretary of Fisheries. Most of Mexico's exports are now marketed in Italy. Disappointing tuna catches during early 1988, however, may make it difficult to meet that goal.

MEXICO REDUCES ROLE OF STATE FISHING CORPORATION -- The Mexican Government has announced sweeping changes in its huge state fishing corporation, Productos Pesqueros Mexicanos (PPM). Six subsidiaries will be dissolved. (P.P. Peninsular, Sardineros Mexicanos, Palangeros Mexicanos del Pacifico, Atuneros Mexicanos, Escameros Mexicanos del Pacifico, Escameros Mexicanos del Golfo.) PPM will also sell majority interest in 19 other companies. Among the entities to be divested are canneries which produced about 40 percent of Mexico's total canned tuna production. The main marketing arms of PPM (Ocean Garden Products (OGP), Exportadores Asociados, and Refrigeradoras de Tepepan), however, are considered of "strategic importance" to the Mexican fishing industry, and will not be sold.

EARLY 1988 MEXICAN TUNA CATCH LESS THAN EXPECTED -- Mexican tuna fishermen caught only 19,400 mt of skipjack and yellowfin tuna during the first 3 months of 1988, a 33 percent decline from the 28,900 mt caught during the same period in 1987. Mexican officials say that the first quarter catch, although lower than expected, does not necessarily mean a lower total tuna catch for the entire year. Officials do

confirm, however, that fishermen are having difficulty locating schools. Mexico had hoped to export about 100,000 mt of tuna in 1988, but that looks unlikely unless catches improve dramatically.

CARIBBEAN

CATCH OF CUBAN TUNA FLEET EXCEEDS PLAN -- The Cuban Tuna Fleet (FAC) projected a catch of 3,800 t of tuna and related species in its 1987 plan. The FAC caught 6,100 mt, exceeding the plan by 60 percent. The FAC shifted its base from Las Palmas in the Canary Islands to Cuban ports during 1987 and expects significant savings of hard currency as a result of the move.

NORTH AMERICA

CANADA FIELDS EIGHT EXPLORATORY TUNA FISHING PROJECTS-- The Canadian Fisheries Minister, Tom Siddon, approved eight exploratory projects in the Middle Atlantic Canadian tuna fishery in 1987. Six, exploring for inshore bluefin tuna, had little success. The other two were directed at a year-round offshore longline fishery for tuna other than bluefin. Both projects were successful during the first four months of operation (August to December, 1987), and 26 mt of bluefin tuna, and 210 mt of "other" tuna species was caught. Two Canadian companies, Grand North Fisheries of Nova Scotia, and Aquatic Foods of Newfoundland, have been given permission to temporarily charter two Japanese longliners in 1988. However, the two companies are required to replace the Japanese vessels with Canadian vessels, and by 1990, the vessels must be crewed by Canadian fishermen.

USDA BUYS CANNED CHUNK LIGHT TUNA -- Between November 1987 and February 1988 the Agricultural Marketing Service (AMS) of the U.S. Department of Agriculture (USDA) purchased 364,700 cases (8,682,100 lbs in both 12.5 oz and 4 lb cans) of canned chunk, light tuna, packed in water, at an approximate delivered cost of $12,105,000 for distribution to school lunch and other domestic feeding programs.

STAFF

Wes Parks, Editor
Pat Donley, Statistics
Al Jackson, Diane Pickelsimer, Copy Editors
Ken Raymond, Art Director

CONTRIBUTORS

Chuck Adams
E. Charles Fullerton
James Joseph

ORGANIZATION

Southwest Regional Office
E. Charles Fullerton, Director

Southwest Fisheries Center
Izadore Barrett, Science and Research Director, Southwest Region
Gary Sakagawa, Tuna Program Coordinator

U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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